

DISTRICT 11

MATERIALS INFORMATION BROCHURE

MATERIALS ENGINEERING BRANCH

**11-SD-15
KP M38.7/M42.7
11-080921**

CT

CALIFORNIA DEPARTMENT OF TRANSPORTATION

Memorandum

To : LEON EDMONDS
Office Engineer
District 11

Date: July 02, 2004

File: 11-SD-15
KP M38.7/M42.7
EA 11-080921

From : **DEPARTMENT OF TRANSPORTATION - DISTRICT 11**
Materials Engineering Branch

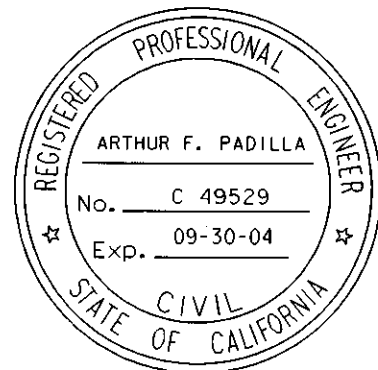
Subject: **Materials Information Brochure**

Attached herewith for your consideration

MATERIALS INFORMATION
FOR PROPOSED PROJECT ON ROUTE 15
IN SAN DIEGO COUNTY
STATE ROUTE 15

For construction of a portion of Route 15
In San Diego County

Arthur F. Padilla
District Materials Engineer



cc: JHaven (35)
R Hopkins (72)
C Thomas (35)
L Medina (35)
Const. Admin. Senior (73)
Project File (mib 080921.doc)

MATERIALS INFORMATION

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EA 080921

NOTE: Information contained herein has been compiled in accordance with Section 2-1.03 of the Standard Specifications. Additional information is available for review at the District 11, Materials Laboratory, 7177 Opportunity Road, San Diego, California.

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MATERIALS INFORMATION

R-VALUE

The recommended design R-value of 40 is based on a previous Materials Report dated April 09, 1973.

CORROSION ANALYSIS

As reported in the Materials Report, dated April 09, 1973, the project soils are suitable for use with concrete pipe but moderately corrosive to metal.

RECOMMENDED CULVERT ALTERNATIVES

Recommendations for New Culverts:

1. 2.01 mm (14 gauge) Corrugated Steel Pipe (CSP) or 1.63 mm (16 gauge) bituminous coated CSP.
2. Reinforced Concrete Pipe (RCP) using the standard design.
3. Plastic Pipe Culverts meeting the minimum and maximum fill height requirements. Either Corrugated Polyethylene (Type S), Ribbed Profile Wall Polyethylene, or Ribbed Profile Wall Polyvinyl Chloride pipe.

GRADING FACTORS

The average relative compaction of existing basement soils 97%. Removal and recompaction of those soils to 90% will produce a grading factor of 1.08 or 8.0% swell. Removal and recompaction of those soils to 95% will produce a grading factor of 1.02 or 2.0% swell. These values are based on test pit data contained the Materials Report dated April 09, 1973.

EARTHWORK QUANTITIES

The following earthwork quantities were provided through the Engineer's Estimate.

Roadway Excavation	30,000 m ³
Structural Backfill (Retaining Wall)	21,965 m ³
Structural Backfill (Bridge)	1,255 m ³
Structural Excavation (Retaining Wall)	21,010 m ³
Structural Excavation (Bridge)	1,054 m ³
Structural Excavation (Type D)	910 m ³
Class 2 Aggregate Base	11,700 m ³
Pervious Backfill Material (R/W)	1,844 m ³
AC (Type A)	13,300 Tonn

MATERIALS SOURCES

A current list (dated April 07, 2004) of mining operations eligible to sell materials such as aggregates to the State of California in San Diego County follows:

Calif. Mine ID	Mine Name	Operated By
91-37-0002	NORTH TWIN OAKS VALLEY QUARRY	HANSON AGGREGATE CO.
91-37-0005	PALA ROCK PLANT (SAND)	HANSON AGGREGATE CO.
91-37-0007	CARROLL CANYON PLANT	HANSON AGGREGATE CO.
91-37-0010	LAKESIDE SAND PIT	C.W. MCGRATH, INC.
91-37-0011	HILLSDALE PIT	C.W. MCGRATH, INC.
91-37-0012	EL CORZAN	CITY OF OCEANSIDE
91-37-0013	SIM J. HARRIS COMPANY	HANSON AGGREGATE CO.
91-37-0015	UCLH SAN MARCOS	HANSON AGGREGATE CO.
91-37-0016	OCEANSIDE/CARLSBAD	HANSON AGGREGATE CO.
91-37-0019	TTT QUARRY	SUPERIOR READY MIX CONCRETE
91-37-0020	HESTER'S GRANITE	HANSON AGG
91-37-0021	SLAUGHTER HOUSE CANYON	PIONEER CONCRETE OF CA., INC.
91-37-0022	MCGRATH BORROW PIT	C.W. MCGRATH, INC.
91-37-0024	MISSION GORGE PIT	SUPERIOR READY MIX CONCRETE, L
91-37-0025	RCP PITS 1,2,3, & 5 INCLUSIVE	RCP BLOCK & BRICK, INC.
91-37-0026	MISSION VALLEY	CALMAT CO
91-37-0027	SLOAN CANYON	SLOAN CANYON SAND COMPNAY
91-37-0028	MISSION VALLEY-EX FENTON	CALMAT CO
91-37-0029	CARROLL CANYON	CALMAT CO
91-37-0030	VULCAN - POWAY	VULCAN MATERIALS
91-37-0033	LAKESIDE	VULCAN MATERIALS
91-37-0034	EL MONTE PIT	HANSON AGGREGATE CO.
91-37-0035	OTAY RANCH PIT	HANSON AGGREGATE CO.
91-37-0036	NELSON & SLOAN PIT 12	HANSON AGGREGATE CO.
91-37-0037	BORDER HIGHLANDS PIT	JIM & LOIS NELSON LP
91-37-0042	MONTE VISTA BORROW PIT	SAN DIEGO COUNTY PUBLIC WORKS
91-37-0043	ALLEN BORROW PIT	SAN DIEGO COUNTY PUBLIC WORKS
91-37-0044	BUCKMAN SPRINGS BORROW PIT	SAN DIEGO COUNTY PUBLIC WORKS
91-37-0045	OLIVE STREET BORROW PIT	SAN DIEGO COUNTY PUBLIC WORKS
91-37-0046	MCCAIN BORROW PIT	SAN DIEGO COUNTY PUBLIC WORKS
91-37-0047	BURNAND BORROW PIT	SAN DIEGO COUNTY PUBLIC WORKS
91-37-0048	WARNER BORROW PIT	SAN DIEGO COUNTY PUBLIC WORKS
91-37-0050	MORETTI-MESA GRANDE B.P.	SAN DIEGO COUNTY PUBLIC WORKS
91-37-0052	NATIONAL QUARRIES	NATIONAL QUARRIES
91-37-0053	JAMUL QUARRY	CALMAT CO.
91-37-0054	INLAND VALLEY MATERIALS	INLAND VALLEY MATERIALS
91-37-0056	PALO VERDE LAKE DESILTATION &	PALO VERDE RANCH HOA
91-37-0057	THE PAUMA VALLEY COUNTRY CLUB	THE PAUMA VALLEY COUNTRY CLUB
91-37-0063	WOODWARD SAND	LAKESIDE LAND COMPANY, INC.
91-37-0064	BAXTER QUARRY	M.J. BAXTER DRILLING COMPANY

LAKE HODGES OPERATING LEVELS

Lake Hodges is currently undergoing a project to enhance Emergency Storage. The San Diego County Water Authority has prepared an Environmental Impact Report (EIR) for the Emergency Storage Plan (ESP) at Lake Hodges.

1. The ESP EIR shows the annual ESP operating levels for Lake Hodges Reservoir after completion of the project;

September 1 through February 28 at 296' mean sea level (msl), short-term fluctuations may exist depending on winter rains/runoffs and subsequent withdrawals in order to maintain water levels.

March 1 through April 30 at 296' msl and gradually filled to a maximum of 311' msl.

May 1 through June 30 at 311' msl and maintained.

July 1 through August 31 at 311' and gradually drained to 296' msl.

2. The current schedule for filling Lake Hodges Reservoir is;

September 2006 through September 2007, drawdown to 290' msl during construction of Lake Hodges Inlet/ Outlet.

October 2007 through December 2007, natural runoff allowed to fill Lake Hodges reservoir.

December 2007 through April 2008, although it is possible to use project facilities to fill Lake Hodges Reservoir to elevation 296' msl; the ESP plan is to continue to let natural runoff fill it.

After May 2008, natural runoff likely to have filled to 311' msl within the next 2 to 5 years.

3. The earliest that Lake Hodges Reservoir could be filled to its initial spill level of elevation 315' msl would be a flood event just after construction of the Lake Hodges Inlet/ Outlet, currently scheduled in October 2007.



Managed Lanes

SAN MARCOS

78

15

ESCONDIDO

Harmony Grove

E.A. 080921

Rancho

Bernardo

Rancho Penasquitos

Carmel Mountain

POWAY

Sabre Springs

Scripps Ranch

Mira Mesa

Optional Disposal Site

Miramar

SAN DIEGO

163

52



June 2002

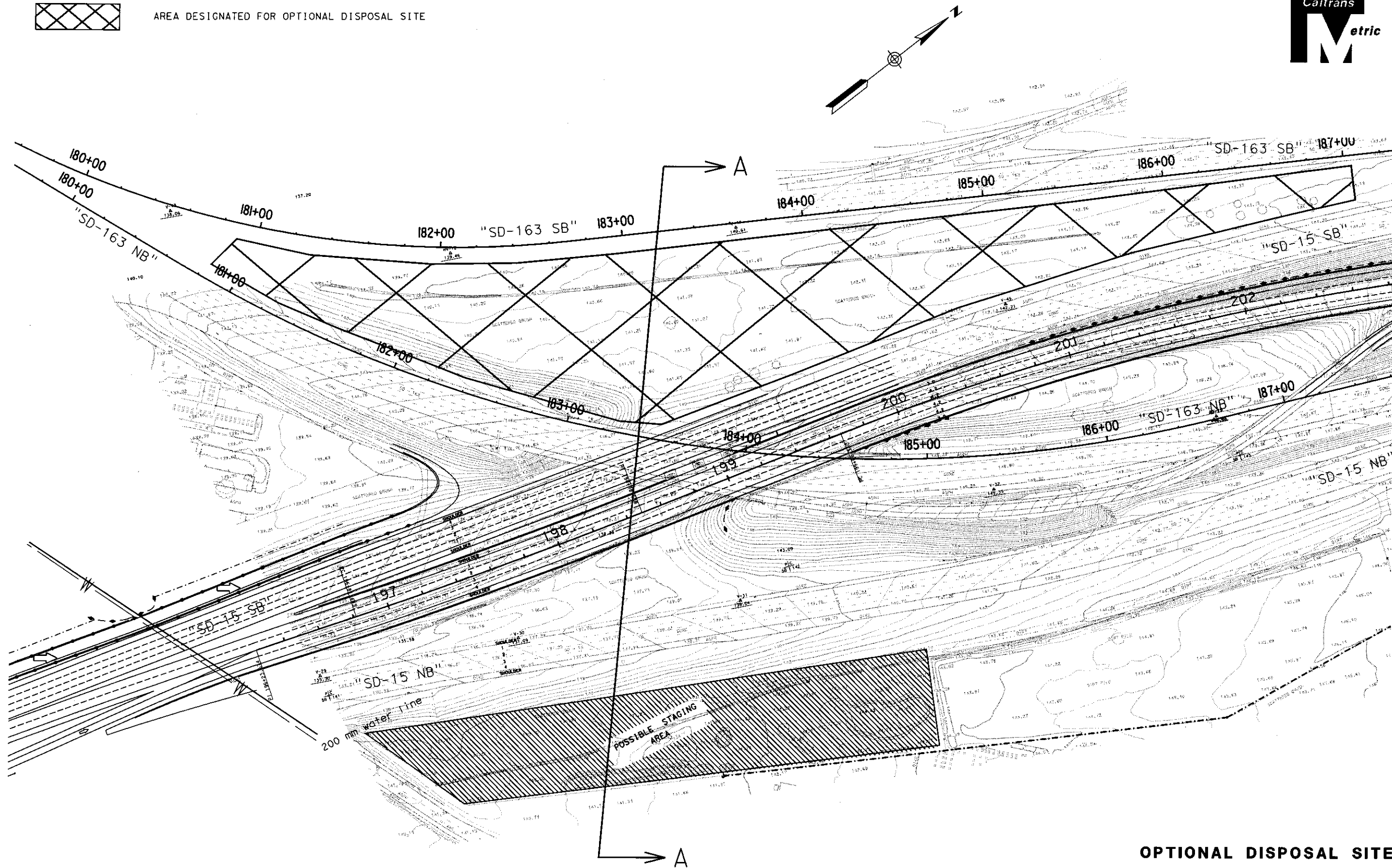
Optional Disposal
Vicinity Map

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	PROJECT ENGINEER		DATE	REVISOR
	L. Z. MEDINA		DATE	REVISOR
Caltrans PROJECT DEVELOPMENT	CHECKED BY		DATE	REVISOR
			DATE	REVISOR

LEGEND:



AREA DESIGNATED FOR OPTIONAL DISPOSAL SITE



OPTIONAL DISPOSAL SITE
2 OF 3

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

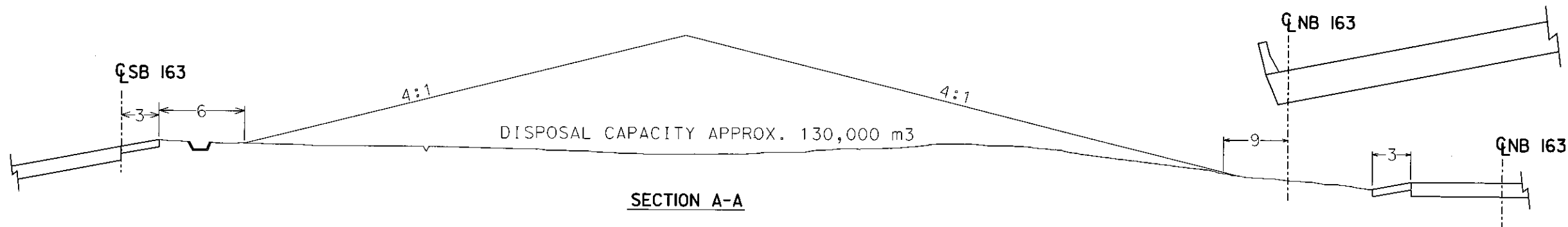
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CU11230

EA 080921

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TIME PLOTTED => 15:46
LAST REVISION



SECTION A-A

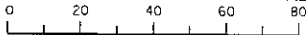
DISPOSAL CAPACITY APPROX. 130,000 m³

OPTIONAL DISPOSAL SITE
3 OF 3

NO SCALE

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

FOR REDUCED PLANS ORIGINAL
SCALE IS IN MILLIMETERS



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CU 11230

EA 080921